

ABSTRACT OF THE DISCLOSURE

Hall device is provided by enabling stable provision of a quantum well compound semiconductor stacked structure. It has first and second compound semiconductor layers composed of Sb and at least two of five elements of Al, Ga, In, As and P, and an active layer composed of $\text{In}_x\text{Ga}_{1-x}\text{As}_y\text{Sb}_{1-y}$ ($0.8 \leq x \leq 1.0$, $0.8 \leq y \leq 1.0$), which are stacked. Compared with the active layer, the first and second compound semiconductor layers each have a wider band gap, and a resistance value five times or more greater. The lattice constant differences between the active layer and the first and second compound semiconductor layers are each designed in a range of 0.0-1.2%, and the thickness of the active layer is designed in a range of 30-100 nm.